
**Plastics — Determination of aerobic
biodegradation of non-floating plastic
materials in a seawater/sediment
interface — Method by analysis of
evolved carbon dioxide**

*Plastiques — Détermination de la biodégradation aérobie des
matières plastiques non-flottantes dans une interface eau de mer/
sédiments — Méthode par analyse du dioxyde de carbone libéré*

(<https://standards.iteh.ai>)
Document Preview

ISO 19679:2020

<https://standards.iteh.ai/catalog/standards/iso/cb5f4dc0-6dc9-4e4b-8570-7dc977dec3d0/iso-19679-2020>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 19679:2020

<https://standards.iteh.ai/catalog/standards/iso/cb5f4dc0-6dc9-4e4b-8570-7dc977dee3d0/iso-19679-2020>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Test environment	2
6 Reagents	2
7 Apparatus	3
8 Procedure	3
8.1 Test material	3
8.2 Reference material	4
8.3 Preparation of the sediment	4
8.4 Test setup	4
8.5 Pre-conditioning phase	4
8.6 Start of the test	5
8.7 Carbon dioxide measurement	5
8.8 End of the test	6
9 Calculation and expression of results	6
9.1 Calculation	6
9.1.1 Amount of CO ₂ produced	6
9.1.2 Percentage of biodegradation	8
9.2 Visual inspection	8
9.3 Expression and interpretation of results	8
10 Validity of results	9
11 Test report	9
Annex A (informative) Example of respirometric system based on CO₂ measurement	11
Bibliography	12

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 14, *Environmental aspects*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 19679:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

- in [Annex A](#): Density of O₂ in air at 1 atm, 28 °C and a relative humidity of 100 % has been corrected and the subsequent calculations have been adapted accordingly.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.